



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,467	08/29/2001	Toru Iizuka	0229-0657P	5043

2292 7590 06/23/2003

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

WYROZEBSKI LEE, KATARZYNA I

ART UNIT	PAPER NUMBER
----------	--------------

1714

DATE MAILED: 06/23/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/940,467

Applicant(s)

IIZUKA ET AL.

Examiner

Katarzyna Wyrozebski Lee

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. The disclosure is objected to because of the following informalities: The present application contains numerous errors on every single page of the application. Many terms that are actually one word are split by space. For example term “res orcinol” should be “resorcinol.

Appropriate correction is required.

Claim Interpretation

It is examiner's position that each other to be functional will inherently contain carcass, tread, sidewalls and belt. Basically each tire has to have those components. Therefore if the prior art of record discloses a tire, the above components (carcass, sidewalls, tread and belt) will not be mentioned. What will be taken into consideration is the fact that the ply contains metal monofilaments coated with topping rubber, since metal monofilaments are not inherent.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Benko (US 4,605,696).

The prior art of Benko discloses rubber composition having increased adhesion to the reinforcing material.

According to abstract of Benko the reinforcement is either textile or metal and comprises rubber, vulcanizing agent, reinforcement, methylene donor and methylene acceptor. The last two components are particularly suitable for metal reinforcement, since the adhesion between rubber and textile does not have the same problems.

The adhesion of the prior art of Benko is between rubber and either filaments or fibers of fabric of brass-plated steel.

According to the Table III (col. 8) rubber composition utilized in adhesion tests comprises, polyisoprene rubber and carbon black in an amount of 60 parts by weight. Table IV (col. 9) further discloses ratios between methylene donor and methylene acceptor.

Specific methylene donors and acceptors include resorcinol or its esters and hexamethylene tetramine usually in a ratio of 1:1.

Art Unit: 1714

Table VIII further discloses carbon black in an amount of 50 pbw and Table IX discloses ratios of donor and acceptor utilized in the composition.

According to claims of Benko, methylene donor is utilized in an amount of 0.5-50 pbw and methylene acceptor is utilized in an amount of 0.5-50 pbw.

According to the prior art of Benko the composition is utilized to treat or coat filaments utilized in tires and those parts of tire utilizing filaments (col. 1, lines 54-64).

In the light of the above disclosure the prior art of Benko anticipates claims rejected above.

4. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Davis (US 4,258,770).

The prior art of Davis discloses rubber composition, which is applied to the metal cords and exhibit increased adhesion.

According to Table in col. 5 (lines 1-10), rubber composition comprises 50pbw of carbon black and Table I (col. 5-6) discloses different combination of methylene donor/acceptor. Specifically example 2 comprises hexamethylene tetramine and resorcinol in amount of 2.32 and 2.0 pbw, which is approximately 1:1 ratio.

According to the prior art of Davis, the brass coated steel cord can be either wire also known as filament or cord.

In the light of the above disclosure, the prior art of Davis anticipates the requirements of claims rejected above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakada (EP 675,161).

The prior art of Nakada discloses rubber composition for a steel belt of a tire. The composition comprises rubber, 60-90pbw of carbon black, sulfur, 2-5 pbw of methylol melamine resin and 2-5 pbw of resorcinol condensate with formaldehyde,

Examples of the prior art of Nakada usually disclose carbon black in amount of 60pbw, melamine resin in 3 and 5 pbw and resorcinol condensate in amount of 3 pbw. Therefore melamine resin is at least in a ratio of 1:1 with resorcinol condensate.

Although the prior art of Nakada does not specifically disclose that the composition is for topping metal filaments, one of ordinary skill would know that the steel belts contain either steel cord, wherein cord comprises plurality of filaments or single filament. One of ordinary skill in the art would know to apply it to the steel containing part of the tire, since methylene donor/acceptor combination is widely utilized as adhesion promoters between metal and rubber.

In the light of the above disclosure it would have been obvious to one having ordinary skill in the art at the time of the instant invention to utilize the composition of the prior art of Nakada as topping rubber composition and thereby obtain the claimed invention. The above composition would have good adhesion property between rubber and the metal filament.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski Lee whose telephone number is (703) 306-5875. The examiner can normally be reached on Mon-Thurs 6:30 AM-4:00 PM.

Art Unit: 1714

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in cursive script, appearing to read "Katarina S. Lee", followed by a horizontal line.

KIWL

June 18, 2003